



PATHFINDER

An informal newsletter published for the GPS user community by PM GPS. Information presented is based on published and submitted news items of interest to the general user. Widest dissemination and reproduction is encouraged. Newsworthy items are solicited for inclusion. Editor Mr. Don Mulligan at PM GPS, PM NAV SYS, Ft Monmouth NJ DSN 992-6137 or (732) 532-6137 or email: Donald.Mulligan1@us.army.mil

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DAGR Fielding Is Underway!

PM's Corner



Greetings!

We are fielding DAGR to Army organizations as quickly as the budget allows. See the condensed version of our FY05 fielding

plan elsewhere in this issue.

Our New Equipment Training (NET) team is also on the road presenting DAGR training and highlighting the many significant differences between DAGR and the PLGR it replaces. Make the most of NET when offered! Repeat visits are not supported in the HQDA directed fielding plan.

This issue also highlights our other new product, the embeddable GPS receiver known as the Ground-based GPS Receiver Applications Module (GB-GRAM) as used in a premier Army system, the Land Warrior.

Questions? Contact me or my staff via the "Contact Box" on the outside cover of this issue.

Skip Harborth, LTC, SC
Product Manager, GPS



Out of the boxes and into the hands of troops! DAGR fielding is underway. One of the first stops was at Fort Carson CO (above). Several hundred DAGRs were unpacked, checked out and handed off to the gaining command whose soldiers wasted no time in checking out the Army's new lightweight hand-held GPS receiver.
Photo: Randy Robinson

DAGR Fielding has begun!

The Army Communications Electronics Command (CECOM) recently issued a Materiel Release for DAGR. This formal review process ensures that new products meet the military requirement, are supportable and do not present any risks to the soldier. With Materiel Release in hand, fielding is underway. The fielding sequence is directed by HQDA and it is being driven by the OPTEMPO of Major Army Commands.

PM GPS objectives are to field DAGR and to provide New Equipment Training as soon as each gaining organization is ready.

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***REMEMBER! PPS is not just GPS,
It's SECURE GPS!***

DAGR Fielding (Cont'd from Page1)

Due to the high level of unit activity these days, the most common approach is to field DAGR at the Brigade equivalent level rather than at the entire Division level. Again, the OPTEMPO of the Major Command dictates the PM GPS fielding and New Equipment Training process.

By the way, the arrival of DAGR does not mean the end of PLGR. Most serviceable PLGR will be cross-leveled to backfill the need for Army GPS receivers in lower priority units. PLGR will be around for years to help fill the Total Army requirement for handheld

GPS receivers. See the related article about "PLGR Disposition" elsewhere in this issue.

The DAGR fielding schedule (current version shown on page 4) will be continually adjusted to support the OPTEMPO. The master plan won't change: PM GPS intends to replace all PLGR with DAGR. And the fielding process won't change: An orderly hand-off of DAGR receivers and accessories will be followed by "Train the Trainer" NET so that every organization has the opportunity to make the best of DAGR features. The Total Army DAGR Fielding program is being managed at the Fort Monmouth Field Office.

Ed McAuley, DSN 992-6136

"Land Warrior System Incorporates Next-generation Secure GPS"

GB-GRAM is integrated into the array of subsystems mounted to the vest/utility belt

In addition to DAGR, PM GPS is delivering another state-of-the-art GPS receiver, the Ground-Based GPS Receiver Applications Module (GB-GRAM) used as an embedded lightweight source of GPS data for weapons and communications systems. This article is the first of a series to show how GB-GRAM is used in a host system.

The Land Warrior System is a significant new Army Program that brings together cutting-edge and battle-proven technologies to create an awesome individual soldier system! Personal GPS is a key element in the system. This article presents an overview of the Land Warrior System and the state-of-the-art secure GPS receiver that will be embedded into it.

The Land Warrior (LW) system integrates lightweight ruggedized military technologies to improve the close combat lethality, survivability and situational awareness of individual soldiers. The LW system is in the System Design and Development Phase of the acquisition process.

There are five Land Warrior subsystems: The Helmet Subsystem provides a color display, audio headset and microphone. The Weapon Subsystem is a rifle with both thermal and multi-functional laser day/night video sights. The Communications Subsystem is comprised of the radio, antenna and computer. The Computer Subsystem stores and shares digital maps, manages data input, processing and output and stores manuals. The Navigation Subsystem includes the GPS receiver and a fall-back dead-reckoning module. Positioning and heading data is displayed on the helmet subsystem and is shared with the computer and communication systems. The Land Warrior body vest also includes portable power, a Soldier Control Unit & Interceptor Body Armor.



Look carefully: Do you see a GPS receiver? No, that's because the Land Warrior system embeds the GB-GRAM in one of the pouches mounted on the vest-utility belt. Photo: Land Warrior.

Land Warrior (Cont'd)

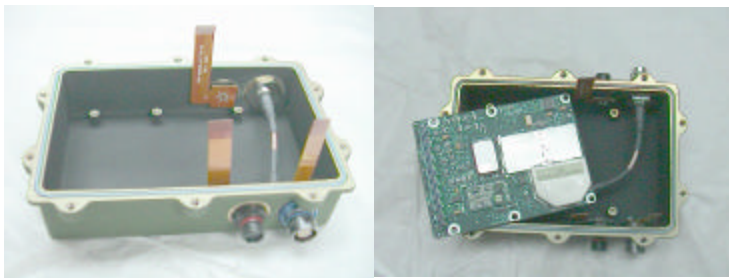
Positioning and timing data from the state-of-the-art GPS receiver is used for Situational Awareness functions. Since LW is a soldier-carried system, total weight is critical. The Ground-Based GPS Receiver Applications Module (GB-GRAM) weighs in at a mere 4 ounces! Since it is a full-featured Secure GPS receiver, it has greater anti-jam and anti-spoof protections than are available from any commercial GPS receiver.

GB-GRAM is fully integrated within the Land Warrior system and is continuously running so there is no need for the soldier to "turn on" a GPS receiver. As long as the icon is displayed in the corner of the screen, you know you have a source of secure GPS.

Land Warrior is designed to operate and communicate with other new weapons systems, enhancing Situational Awareness for the total force. If LW looks like a step towards the "Star Wars" image of a hardened computer-capable fully-wired warrior, it is!

Another element of the LW Future Warrior program is the Commander's Digital Assistant (CDA), designed to be a rugged handheld device for sharing data and communications. LW plans to incorporate the GB-GRAM receiver into the CDA and make the CDA a "spiral development" of LW technology which means it is a step towards the complete Land Warrior ensemble. LW has sent early model CDA to Iraq in support of operational units. If proven successful, the CDA will likely be one of the first elements of the Land Warrior system to be fielded.

PM Land Warrior, LTC Gallop
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Here's a closer view of the LW Navigation Sub-system. Inside the pouch is a hard case measuring about 4 X 4 X 9 inches. An empty case is shown on the left while the case on the right includes a GB-GRAM. Once the GB-GRAM is installed, the case is sealed and the pouch connected to the other subsystems, the Land Warrior soldier has full time hands-free military GPS. Photos: Land Warrior.

Who has Time For Training!

DAGR provides GPS positioning data just like PLGR, but DAGR has an array of new features that really sets it apart. The two devices share a COMSEC-activated Secure GPS rating but the screen displays and operations are quite different. For this reason we urge every command to make the most of NET when offered. (Below: A recent NET course at Fort Carson—photos: Randy Robinson). Experience gained during the intense 3 day course will be useful given the fast pace of today's operating environment. The number of student slots for NET courses offered at fielding sites is confirmed before training begins. MAKE TIME for NET!

Bill Hardy, NET Manager, DSN 992-4769



Army Acquisition Executive Checks out the DAGR



The Honorable Claude M. Bolton, Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology, ASA (ALT) and Army Acquisition Executive examines a DAGR at a recent Army event.

Mr. Bolton was briefed by Mr. Willie Jackson, (right) from the GPS Georgia Field Office.

The state-of-the-art GPS receiver is now displacing the PLGR and fielding will continue for several years.

Photo: ASA (ALT)

DAGR FIELDING SCHEDULE FOR 2005

2nd Quarter FY05

- 101st Air Assault DIV (Kentucky) * 3 BDEs
- 48th ESB (Georgia)
- 4th Infantry DIV (Texas) * 2 BDEs

3rd Quarter FY05

- 2/28th INF (Pennsylvania)
- SBCT, 2nd ACR (Louisiana)
- 53rd SIB (Florida)

4th Quarter FY05

- 86/42 INF (Vermont)
- CSS EAD (Various locations)
- 10th MTN DIV (New York) * 3 BDEs
(Continues into FY06)



Notes: DAGR fielding schedule is subject to change. This schedule was current as of Jan 2005. The sequence is determined by HQDA. Except where noted (*) fielding is usually made to one Brigade or equivalent at each station. Actual fielding dates are determined in coordination with each Major Command.

Disposition Instructions for PLGR

Now that DAGR fielding is underway, when the GPS team gets to your organization, what happens to the PLGR that you've been using for years?

As you know the PLGR is a Property Book Item and your Property Book Officer or PBO maintains accountability for them. That doesn't change with the arrival of the DAGR.

At the unit level, any PLGR deemed excess due to DAGR fielding should be turned in for cross-leveling within the command to fill any shortage of military GPS receivers elsewhere in the command.

At the Installation or Major Command level, PLGRs deemed excess to organizational needs should be returned to PM GPS who will determine the highest priority need for them elsewhere in the Army.

A PBO can dispose of certain accountable property by signing it over to the surplus property disposal office (usually called the Defense Reutilization Management Office or DRMO). That option **DOES NOT EXIST** for PLGR!

When a PBO or installation property office has PLGRs excess to requirements, they should contact PM GPS. Local disposal or destruction of a PLGR is **NEVER AUTHORIZED** due to the security module that processes the COMSEC crypto-variable key making the PLGR a Precise Position Service (PPS)-rated military-only item.

PM GPS will only authorize the "demilitarization" of a PLGR when it is not repairable or when all other requirements for military receivers are satisfied. Note that PLGR demilitarization includes both disassembly and disposal. PLGRs are never converted to a civilian version and offered for sale.

PLGR demilitarization can only be performed at a designated facility. The National Security Agency (NSA) has designated one such facility to remove and destroy the security module as part of the "demil" and disposal process.

When a unit returns excess PLGR to PM GPS using DD1149, they will receive back documentation to relieve Property Book accountability. Contact PM GPS at Fort Monmouth for information and shipping instructions on where to send PLGR.

Non-governmental ownership of any PPS GPS device is and will remain, unauthorized. PLGR found outside of military and/or other authorized government agencies are subject to confiscation and the possessor subject to prosecution under federal law.



Now referred to as Legacy GPS receivers, standard and enhanced PLGR will soldier on for several more years. Even when retirement comes, they will NOT be authorized for retention as personal property under any circumstances.

Questions? Contact PM GPS at Fort Monmouth DSN 992-5758. For other branches of service, contact the PLGR Item Manager at Warner Robins AFB Diana Wright at DSN 468—5096.

Suzanne Reinhardt-Smith DSN 992-5758.

Questions about Reprogramming PLGR?

*Standard (Tan) PLGR Uses 613-9854-005
Enhanced (Green) PLGR Uses 613-9868-008*

*MWO 11-5825-291-30-4 (Feb 03)
Reprogramming Kit 5825K3118012ANS*

*Software Assistance:
Frank Rowe at DSN 468-9511*

*Reprogramming Assistance:
Bill Pohlmann at DSN 992-6131
William Burnette DSN 468-1109.*

See July 2004 issue online for more PLGR Reprogramming information!

How to Contact PM GPS

Product Management Office (PMO) Los Angeles CA

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Who to Call?

For GPS policy, platform integration and new products, call the PMO.

For equipment authorization, maintenance status, fielding, and NET, call the MFO.

For sustainment issues including software, supply, technical publications, accessories, host vehicle installations, call the GFO.

Or contact one of our Help Lines:

Willie Jackson in Georgia at DSN 468-3518
Willie.Jackson@robins.af.mil

Jim Buggy in NJ at DSN 992-4733
James.Buggy@mail1.monmouth.army.mil.

Visit the PM GPS WEBSITE:
<http://army-gps.robins.af.mil>

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